REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 45, 49-51, 55-58, 60-63, 65-69, 73, 74, 77, and 80 have been amended, claims 46-48, 52-54, 70-72, 75, 76, 78, and 79 have been cancelled, and claims 81-85 have been newly added. Support for the amendments is provided, for example, in the cancelled claims, Figs. 7-11, and paragraph [0095] of Applicants' published specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 45-55, 58-67, and 69-80 were rejected, under 35 USC §102(b), as being anticipated by Yu et al. (US 6,047,186). Claims 56, 57, and 68 were rejected, under 35 USC §103(a), as being unpatentable over Yu in view of Craig et al. (US 6,882,847). To the extent that these rejections may be deemed applicable to the amended and new claims presented herein, the Applicants respectfully traverse as follows.

Claim 45 now recites subject matter of cancelled claims 46 and 47 and defines a method for balancing the interference among radio cells in a wireless communication system. According to this method, each of a plurality of adjacent radio cells is assigned identical sets of subcarriers for communication. Additionally, each of a plurality of transmission power ranges is associated with a set of subcarriers in each of the radio cells.

In an exemplary, non-limiting, embodiment of the claimed subject matter illustrated in Applicants' Figs. 7 and 8, each of three adjacent radio cells has three sets of subcarriers, which are identified as sets SBS1, SBS2, and SBS3. Set SBS1 has identical subcarriers in each radio

cell, as do sets SBS2 and SBS3. For each radio cell, a transmission power range, indicated in Fig. 8 by a maximum power Pmax, is assigned to each set of subcarriers within the cell. As pertains to Fig. 8, the maximum power assigned to subcarrier set SBS1 in radio cell 1 is greater than the maximum power assigned to subcarrier sets SBS2 and SBS3, whereas it is less than the maximum power assigned to subcarrier sets SBS2 and SBS3 in radio cell 2. By balancing the maximum power allotted to an identical set of subcarriers in each of two or more cells in this way, the signal interference between radio cells may be reduced (see paragraph [0033] of Applicants' published specification).

The Office Action proposes that Yu discloses, in Figs. 1-3, the claimed subject matter whereby adjacent radio cells have identical sets of subcarriers (see Office Action page 12, second paragraph).

However, Yu expressly discloses in Fig. 1 that no frequencies are reused (see Yu col. 2, lines 41-50, for the meaning of frequency reuse) within the illustrated group of radio cells. More specifically, Yu discloses that each cell within Fig. 1 utilizes a set of channels such that each channel is based upon a set of carrier frequencies different from those utilized by any other cell 101, 102, 103, 104, 105, 106, 107 within seven-cell cluster 100 (see Yu col. 3, lines 56-60). Simply put, Yu discloses that each radio cell of the group uses one or more frequencies that differ from all frequencies used by the other radio cells of the group.

In Fig. 2, Yu discloses how the idealized hexagonal cell shapes illustrated in Fig. 1 may be modified to accord with real-world conditions. And in Fig. 3, Yu illustrates how the reception quality of base station communications may be measured at different points within real-world cell boundaries.

Nowhere does Yu disclose that each of multiple adjacent cells have identical sets of frequencies. Thus, Yu does not disclose the Applicants' claimed subject matter of assigning identical sets of subcarriers to each of a plurality of adjacent radio cells.

The Office Action further proposes that Yu discloses, in column 5, lines 1-44, the Applicants' claimed subject matter of associating each of a plurality of transmission power ranges with a set of subcarriers in each of a plurality of radio cells (see Office Action page 12, third paragraph).

By contrast to the Office Action's proposal, however, Yu discloses assigning particular frequency groups to each sector within a communication sub-area so as to optimize the signal-to-noise ratio for communication within the sub-area (see Yu col. 5, lines 14-17). Yu further discloses assigning frequency groups in this way to each sector of all other sub-areas within a geographic area, so as to optimize the signal-to-noise ratio for communication within the geographic area (see col. 5, lines 18-29).

Yu's disclosure of assigning particular frequency groups to each sector within a communication sub-area is not the same as the Applicants' claimed subject matter of associating each of a plurality of transmission power ranges with a set of subcarriers in each of a plurality of radio cells.

In summary, Yu does not identically disclose the Applicants' claimed subject matter of: (1) assigning identical sets of subcarriers to each of a plurality of adjacent radio cells and (2) associating each of a plurality of transmission power ranges with a set of subcarriers in each of the radio cells. Accordingly, Yu does not anticipate the subject matter now defined by claim 45. Independent claims 50, 51, 69, 73, 74, and 85 now similarly recite this subject matter, although

claims 69, 73, 74, and 85 do so with respect to apparatuses and claims 51 and 74 do so with respect to radio sectors rather than radio cells. Therefore, allowance of claims 45, 50, 51, 69, 73, 74, and 85 and all claims dependent therefrom is considered to be warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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JEL/DWW/att

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